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IS : 3281 - 1966

# *Indian Standard*

## DIMENSIONS FOR MUSHROOM VENTILATORS WITH FIXED HEAD — WELDED TYPE

( First Reprint FEBRUARY 1977 )

UDC 621.61 : 629.12



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**INDIAN STANDARDS INSTITUTION**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

Price Rs 5.00 **Gr 2**

March 1966

# Indian Standard

## DIMENSIONS FOR MUSHROOM VENTILATORS WITH FIXED HEAD — WELDED TYPE

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# *Indian Standard*

## DIMENSIONS FOR MUSHROOM VENTILATORS WITH FIXED HEAD — WELDED TYPE

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 14 January 1966, after the draft finalized by the Marine Engineering and Shipbuilding Sectional Committee had been approved by the Mechanical Engineering Division Council.

**0.2** This standard is one of a series of Indian Standards dealing with mushroom ventilators. Other standards in the series are:

IS : 3279-1966 General requirements for mushroom ventilators

IS : 3280-1966 Dimensions for mushroom ventilators with adjustable head — welded type

IS : 3282-1966 Dimensions for mushroom ventilators with adjustable head — cast iron type

IS : 3283-1966 Dimensions for mushroom ventilators with adjustable head — cast iron type with provision for passage of light

**0.3** Indian Standard general requirements for mushroom ventilators ( IS : 3279-1966 ) is a necessary adjunct to this standard.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

### 1. SCOPE

**1.1** This standard specifies the dimensions for mushroom ventilators with fixed head — welded type.

### 2. DESCRIPTION

**2.1** This type of ventilator consists of a fabricated mushroom head and the coaming to which the head is fixed by means of bolts or screws.

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\*Rules for rounding off numerical values ( revised ).

**IS : 3281 - 1966**

**2.2** The heads are of two types, namely, A and B.

### **3. MATERIAL**

**3.1** The materials of various parts of ventilator shall be as given in IS : 3279-1966\*.

### **4. DIMENSIONS AND TOLERANCES**

**4.1** The dimensions of Type A and Type B heads with coaming shall be as given in Table 1 and Table 2 respectively.

**4.2** The tolerances on the dimensions of the various parts of mushroom ventilators shall be according to the relevant Indian Standards, where available.

**4.2.1** The tolerances on all other dimensions shall be according to the coarse series of IS : 2102-1962†.

### **5. DESIGNATION**

**5.1** The mushroom ventilator with fixed head — welded type shall be designated by the name, type, the nominal size and number of this standard.

*Example:*

A mushroom ventilator with fixed head — welded type having a nominal size of 150 mm, conforming to this standard shall be designated as:

Mushroom Ventilator with Fixed Head — Welded  
Type 150 IS : 3281

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\*General requirements for mushroom ventilators.

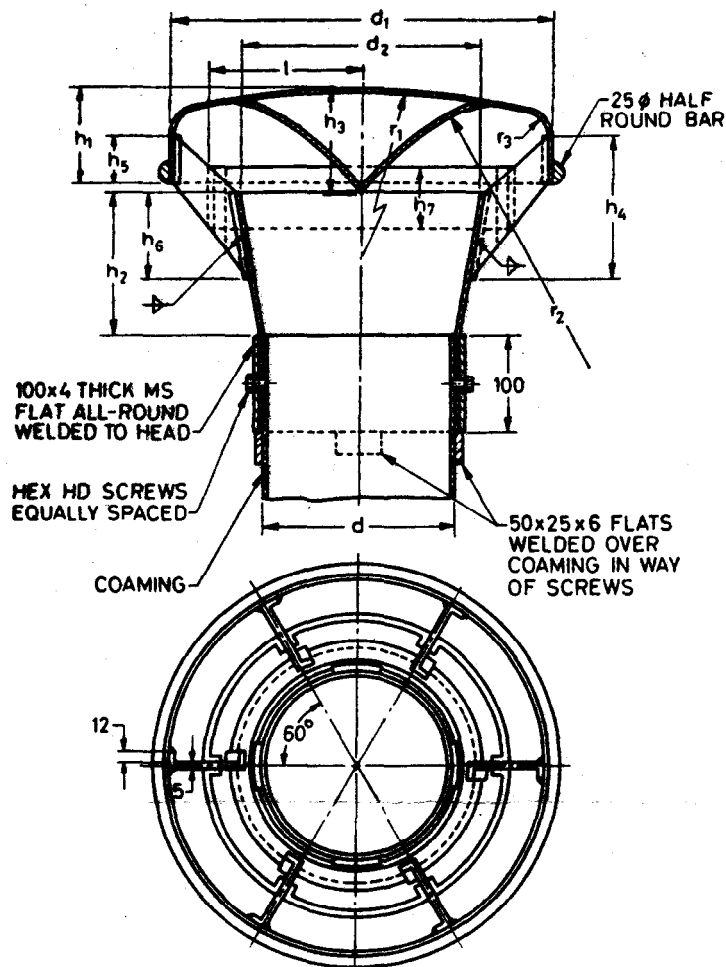
†Recommendations for machining deviations for dimensions without specified tolerances.  
( Since revised ).



**TABLE 1 DIMENSIONS FOR TYPE A HEAD OF MUSHROOM VENTILATORS**

(Clause 4.1)

All dimensions in millimetres.

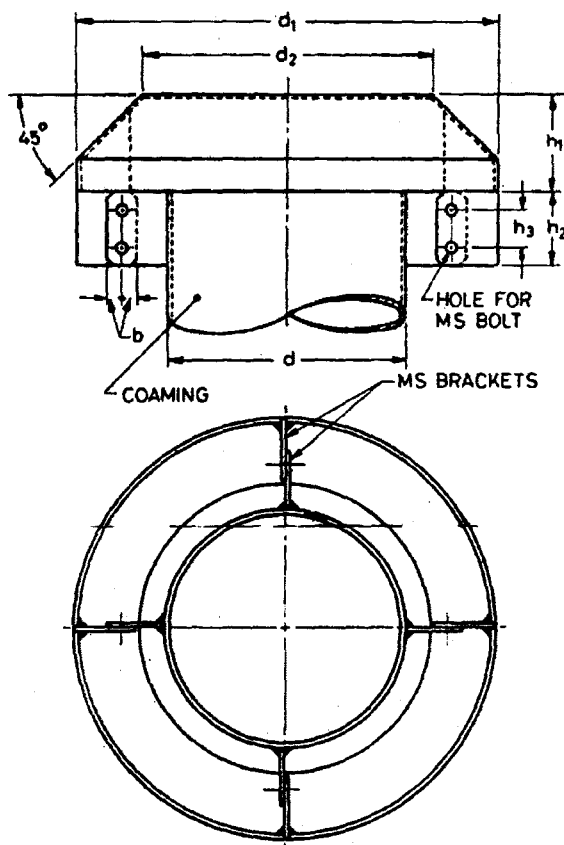


NOMINAL DIA d	d <sub>1</sub> (2d)	d <sub>2</sub> (1.25d)	h <sub>1</sub> (0.5d)	h <sub>2</sub> (0.75d)	h <sub>3</sub> (0.56d)	h <sub>4</sub> (0.75d)	h <sub>5</sub> (0.25d)	h <sub>6</sub> (0.45d)	h <sub>7</sub> (0.3d)	l (0.8d)	r <sub>1</sub> (4d)	r <sub>2</sub> (1.5d)	r <sub>3</sub> (0.16d)	THICK- NESS OF SHEET	DIA OF MS SCREWS	No. OF SCR- EWS
150	300	188	75	113	84	113	38	67	45	120	600	225	24	2.0	M10	4
200	400	250	100	150	112	150	50	90	60	160	800	300	32	2.0	M10	4
250	500	313	125	188	140	188	63	113	75	200	1000	375	40	2.0	M10	4
300	600	375	150	225	168	225	75	135	90	240	1200	450	48	2.0	M10	4
350	700	437	175	263	196	263	88	158	105	280	1400	525	56	2.0	M16	6
400	800	500	200	300	224	300	100	180	120	320	1600	600	64	2.0	M16	6
450	900	562	225	338	253	338	113	203	135	360	1800	675	72	2.0	M16	6
500	1000	625	250	375	280	375	125	225	150	400	2000	750	80	2.0	M16	6
550	1100	687	275	413	308	413	138	248	165	440	2200	825	88	2.0	M16	8
600	1200	750	300	450	336	450	150	270	180	480	2400	900	96	2.0	M16	8
700	1400	875	350	525	392	525	175	315	210	560	2800	1050	112	2.8	M16	8
800	1600	1000	400	600	448	600	200	360	240	640	3200	1200	128	2.8	M16	8
900	1800	1125	450	675	504	675	225	405	270	720	3600	1350	144	2.8	M16	8
1000	2000	1250	500	750	560	750	250	450	300	800	4000	1500	160	2.8	M20	12
1100	2200	1375	550	825	616	825	275	495	330	880	4400	1650	176	2.8	M20	12
1250	2500	1562	625	938	700	938	313	563	375	1000	5000	1875	200	2.8	M20	12
1400	2800	1750	700	1050	784	1050	350	630	420	1120	5600	2100	224	2.8	M20	12
1600	3200	2000	800	1200	898	1200	400	720	480	1280	6400	2400	256	2.8	M20	12

**TABLE 2 DIMENSIONS FOR TYPE B HEAD OF MUSHROOM VENTILATORS**

( Clause 4.1 )

All dimensions in millimetres.



NOMINAL DIA $d$	$b$	$d_1$ (1.75d)	$d_2$ (1.2d)	$h_1$ (0.4d)	$h_2$ (0.3d)	$h_3$	THICKNESS OF SHEET AND MS BRACKETS	No. OF BRACKETS	BOLT DIA	No. OF BOLTS	No. OF DRILLED HOLES ON EACH BRACKET
150	24	263	180	60	45	20	3	3 Sets	M8	6	2
200	24	350	240	80	60	30	3	3 Sets	M8	6	2
250	24	438	300	100	75	40	3	3 Sets	M8	6	2
300	30	525	360	120	90	50	4	4 Sets	M10	8	2
350	30	613	420	140	105	60	4	4 Sets	M10	8	2
400	30	700	480	160	120	70	4	4 Sets	M10	8	2
450	30	788	540	180	135	80	4	4 Sets	M10	8	2
500	30	875	600	200	150	90	4	4 Sets	M10	8	2
550	30	963	660	220	165	100	4	4 Sets	M10	8	2
600	36	1 050	720	240	180	60	6	6 Sets	M12	18	3
700	36	1 225	840	280	210	75	6	6 Sets	M12	18	3
800	36	1 400	960	320	240	90	6	6 Sets	M12	18	3
900	36	1 575	1 080	360	270	105	6	6 Sets	M12	18	3
1 000	48	1 750	1 200	400	300	100	8	8 Sets	M16	24	3
1 100	48	1 925	1 320	440	330	115	8	8 Sets	M16	24	3
1 250	48	2 188	1 500	500	375	130	8	8 Sets	M16	24	3
1 400	48	2 450	1 680	560	420	160	8	8 Sets	M16	24	3
1 600	48	2 800	1 920	640	480	190	8	8 Sets	M16	24	3

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